

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (original) A method for determining when to stop an engine in a vehicle having a second power source, the method comprising:

comparing at least one engine condition to a corresponding predetermined engine condition, thereby generating a first flag;

comparing at least one vehicle system controller condition to a corresponding predetermined vehicle system controller condition, thereby generating a second flag;

comparing at least one second power source condition to a corresponding predetermined second power source condition, thereby generating a third flag; and

stopping the engine when at least one of the flags indicates an engine stop condition.

2. (original) The method of claim 1, wherein the first flag indicates an engine stop condition when each of the at least one engine conditions matches a corresponding predetermined engine condition, the second flag indicates an engine stop condition when each of the at least one vehicle system controller conditions matches a corresponding predetermined vehicle system controller condition, and the third flag indicates an engine stop condition when each of the at least one second power source conditions matches a corresponding predetermined second power source condition.

3. (original) The method of claim 1, wherein the at least one vehicle system controller condition includes at least one driver-controlled condition chosen from a set of driver-controlled conditions, the set including a driver actuated switch position, an accelerator pedal position, a brake pedal position, and a gear lever position.

4. (original) The method of claim 3, wherein the predetermined vehicle system controller conditions include predetermined driver-controlled conditions, the

predetermined driver controlled conditions including the driver actuated switch in an enable position, the accelerator pedal in a completely released position, the brake pedal in a depressed position, and the gear lever not in a reverse position.

5. (currently amended) The method of claim 1, wherein the at least one vehicle system controller condition includes at least one vehicle condition chosen from a set of vehicle conditions, the set including a current vehicle speed, a maximum vehicle speed since engine start, and an engine runtime.

6. (original) The method of claim 5, wherein the predetermined vehicle system controller conditions include predetermined vehicle conditions, the predetermined vehicle conditions including the current vehicle speed being approximately zero, the maximum vehicle speed being at least a predetermined minimum vehicle speed, and the engine runtime being at least a predetermined minimum engine runtime.

7. (original) The method of claim 1, wherein the at least one vehicle system controller condition includes at least one energy management condition chosen from a set of energy management conditions, the set including a second power source state of charge and a required electrical load.

8. (original) The method of claim 7, wherein the predetermined vehicle system controller conditions include predetermined energy management conditions, the predetermined energy management conditions including the state of charge being greater than a predetermined minimum state of charge, and the required electrical load being at or below a predetermined maximum electrical load.

9. (original) The method of claim 1, wherein the vehicle includes a transmission, a motor, and a climate control system, the method further comprising:

comparing at least one transmission condition to a corresponding predetermined transmission condition, thereby generating a transmission flag;

comparing at least one motor condition to a corresponding predetermined motor condition, thereby generating a motor flag; and

comparing at least one climate control condition to a corresponding predetermined climate control condition, thereby generating a climate flag.

10. (original) The method of claim 9, wherein the engine is stopped only when each of the flags indicates an engine stop condition.

11. (original) A method for enabling engine standby in a vehicle having an engine, a motor, and a battery, the method comprising:

determining whether at least one engine condition matches a corresponding predetermined engine condition;

determining whether at least one vehicle system controller condition matches a corresponding predetermined vehicle system controller condition;

determining whether at least one second power source condition matches a corresponding predetermined second power source condition; and

enabling engine standby when at least one of the determined conditions matches a corresponding predetermined condition.

12. (original) The method of claim 11, wherein the vehicle includes a transmission and a climate control system, the method further comprising:

determining whether at least one transmission condition matches a corresponding predetermined transmission condition;

determining whether at least one motor condition matches a corresponding predetermined motor condition; and

determining whether at least one climate control condition matches a corresponding predetermined climate control condition.

13. (original) The method of claim 12, wherein engine standby is enabled only when each of the determined conditions matches a corresponding predetermined condition.

14. (original) The method of claim 11, wherein the at least one vehicle system controller condition includes at least one driver-controlled condition, at least one vehicle condition, and at least one energy management condition; and

wherein the predetermined vehicle system controller conditions include predetermined driver-controlled conditions, predetermined vehicle conditions, and predetermined energy management conditions.

15. (original) The method of claim 14, wherein the at least one driver-controlled condition is chosen from a set of driver-controlled conditions, the set including a driver actuated switch position, an accelerator pedal position, a brake pedal position, and a gear lever position;

the at least one vehicle condition is chosen from a set of vehicle conditions, the set including a current vehicle speed, a maximum vehicle speed, and an engine runtime; and

the at least one energy management condition is chosen from a set of energy management conditions, the set including a battery state of charge and a required electrical load.

16. (original) The method of claim 15, wherein the predetermined driver-controlled conditions include the driver actuated switch in an enable position, the accelerator pedal in a completely released position, the brake pedal in a depressed position, and the gear lever not in a reverse position;

the predetermined vehicle conditions include the current vehicle speed being approximately zero, the maximum vehicle speed being at least a predetermined minimum vehicle speed, and the engine runtime being at least a predetermined minimum engine runtime; and

the predetermined energy management conditions include the battery state of charge being greater than a predetermined minimum state of charge, and the required electrical load being at or below a predetermined maximum electrical load.

Claims 17-20 (canceled)

21. (new) The method of claim 5, wherein the step of comparing at least one vehicle system controller condition to a corresponding predetermined vehicle system controller condition includes:

comparing the maximum vehicle speed since engine start to a predetermined minimum vehicle speed; and

comparing the engine runtime to a predetermined runtime, and

wherein the generated second flag indicates an engine standby enable condition only when at least one of the maximum vehicle speed since engine start is greater than the predetermined minimum vehicle speed, or the engine runtime is greater than the predetermined runtime.

22. (new) The method of claim 11, wherein the at least one vehicle system controller condition includes at least one vehicle condition chosen from a set of vehicle conditions, the set including a current vehicle speed, a maximum vehicle speed since engine start, and an engine runtime, the step of determining whether at least one vehicle system controller condition matches a corresponding predetermined vehicle system controller condition including:

determining whether the maximum vehicle speed since engine start is greater than a predetermined minimum vehicle speed; and

determining whether the engine runtime is greater than a predetermined runtime, and

wherein the at least one vehicle system controller condition matches a corresponding predetermined vehicle system controller condition only when at least one of the

maximum vehicle speed since engine start is greater than the predetermined minimum vehicle speed, or the engine runtime is greater than the predetermined runtime.

23. (new) A method for enabling engine standby in a vehicle having an engine, a motor, and a battery, the method comprising:

starting an engine standby enable routine;

determining whether at least one engine condition matches a corresponding predetermined engine condition;

determining whether at least one vehicle system controller condition matches a corresponding predetermined vehicle system controller condition, the at least one vehicle system controller condition including at least one vehicle condition chosen from a set of vehicle conditions, the set including a current vehicle speed, a maximum vehicle speed since engine start, and an engine runtime; and

enabling engine standby when at least one of the determined conditions matches a corresponding predetermined condition.

24. (new) The method of claim 23, wherein the step of determining whether at least one vehicle system controller condition matches a corresponding predetermined vehicle system controller condition includes:

determining whether the maximum vehicle speed since engine start is greater than a predetermined minimum vehicle speed; and

determining whether the engine runtime is greater than a predetermined runtime,
and

wherein the at least one vehicle system controller condition matches a corresponding predetermined vehicle system controller condition only when at least one of the maximum vehicle speed since engine start is greater than the predetermined minimum vehicle speed, or the engine runtime is greater than the predetermined runtime.